Engin
Engineering

Index of Feature Material
MATERIALS & METHODS

EAST ENGIN. LIBRARY
TN
1
M58

Volume 37, January-June 1953, Inclusive

Material covered in this index includes feature articles, MATERIALS & METHODS Manuals, and Engineering File Facts.

Adhesive Joining of Wood to Steel Increases TV Cabinet Production—Jan, p 82

Aluminum and Its Alloys
- Aluminum Alloys, New High Purity—June, p 110
- Aluminum Castings, How to Buy—Jan, p 95
- Aluminum in Electrical Applications—Feb, p 89

Carbide Hardfacing by New Inert-Gas-Arc Method—Jan, p 80
Careful Materials Selection Speed Products of Special Generator—June, p 112

Brazing (see Welding)

Castings and Casting
- Aluminum Castings, How to Buy—Jan, p 95
- Cast Valve Tappets Redesigned for Formed Steel—Mar, p 108
- Jet Engine Blades, Which Metal Form for—Feb, p 92
- Malleable Iron Castings (MATERIALS & METHODS Manual)—Mar, p 109
- Shell Mold Castings, Where They Stand Today—Jan, p 73
- Steel Tubing, Centrifugally Cast—Feb, p 104

Ceramic Coatings in Industrial Applications, High Temperature—Jan, p 162
Chromizing Improves Surface Properties of Steels—May, p 106

Cleaning and Finishing
- Magnesium Alloys, Chemical and Electrical Treatments for (File Fact)—Jan, p 121
- Stainless Steel, How to Clean Stubborn Deposits from—June, p 252
- Steam Atmospheres, Many Common Metals Successfully Treated in—Jan, p 85

Coatings and Finishes
- Carbide Hardfacing by New Inert-Gas-Arc Method—Jan, p 80
- Ceramic Coatings in Industrial Applications, High Temperature—Jan, p 162
- Electrically Conductive Rubbers Are Proving Useful, Where—Apr, p 96
- Electrodeposited Nickel, Properties of—Apr, p 101
- Electroless Plating—Where It Stands Today—May, p 96
- Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101
- Nodular Iron, Plywood, Hot Dipped Coating Make Better Fans—June, p 106
- Prepainted Steel Strip for Production Forming—Mar, p 158
- Rhodium Electroplates Now Possible, Heavy—Mar, p 85
- Steam Atmospheres, Many Common Metals Successfully Treated in—Jan, p 85
- Vacuum Metallizing, Economical Coatings By—June, p 97
- White Brass Plated Coatings, A Critical Look at—Feb, p 97

Cold Treatments Improve Performance of Materials—Feb, p 115

Copper, Brass and Bronze
- White Brass Plated Coatings, A Critical Look at—Feb, p 97
- Shell Mold Castings, Where They Stand Today—Jan, p 73

Corrosion
- Corrosion of Materials by Liquid Low Melting Alloys (File Fact)—Mar, p 131
- Corrosion Resistant Alloy, A New—May, p 92
- Galvanic Corrosion (File Fact)—Jan, p 119

Electrically Conductive Rubbers Are Proving Useful, Where—Apr, p 96
Electrodeposited Nickel, Properties of—Apr, p 101
Electroless Plating—Where It Stands Today—May, p 96

Engineering File Facts
- Corrosion of Materials by Liquid Low Melting Alloys—Mar, p 131
- Fluorocarbon Plastics—Apr, p 133
- Galvanic Corrosion—Jan, p 119
- Industrial Glasses—May, p 135
- Magnesium Alloys, Chemical and Electrical Treatments for—Jan, p 121
- Methyl Methacrylate Plastics—June, p 125
- Nickel Alloys, Low Expansion—Jan, p 123
- Plastics, Properties and Applications of Some Common—Feb, p 139
- Properties and Heat Treatment of Diffusion Hardening—Apr, p 135
- Properties and Heat Treatment of Magnet Steels—Apr, p 137
- Steels, Relationship Between Mechanical Properties and Hardness of—Feb, p 137
- Tin-Base Bearing Metals—Mar, p 129
- Tin and Tin Alloys—Mar, p 127
- Titanium, Molybdenum, Zirconium and Hafnium—June, p 123
- Tungsten, Tantalum, Columbium and Vanadium—June, p 127

Flame Hardened Engine Parts for High Production—Apr, p 90
Fluorocarbon Plastics—Apr, p 110
Fluorocarbon Plastics (File Fact)—Apr, p 133
Foam Plastics Cast to Desired Shape, New—Feb, p 108

Forgings, Forming
- Cast Valve Tappets Redesigned for Formed Steel—Mar, p 108
- Jet Engine Blades, Which Metal Form for—Feb, p 92
- Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101

Fused Quartz—A Versatile Industrial Material—Feb, p 98
Galvanic Corrosion (File Fact)—Jan, p 119
Gaskets, New Flowed-In—Jan, p 78
Glass Fiber-Filled Molding Resins, New—Jan, p 87
Glass Fiber Mat Has Controlled Resiliency—Apr, p 176
Glass-Reinforced Plastics (MATERIALS & METHODS Manual)—Feb, p 119

Heating, Heat Treatment, Cold Treatment
- Cast Valve Tappets Redesigned for Formed Steel—Mar, p 108
- Chromizing Improves Surface Properties of Steels—May, p 106
- Cold Treatments Improve Performance of Materials—Feb, p 115
- Flame Hardened Engine Parts for High Production—Apr, p 90
- Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101
- Properties and Heat Treatment of Diffusion Hardening (File Fact)—Apr, p 135
- Properties and Heat Treatment of Magnet Steels (File Fact)—Apr, p 137
- Salt Bath Case Hardening with Molybdenum and Tungsten—Mar, p 94
- Steam Atmospheres, Many Common Metals Successfully Treated in—Jan, p 85

High Density Alloys for Heavy Weight Applications—Apr, p 86

High Temperature Materials
- Ceramic Coatings in Industrial Applications, High Temperature—Jan, p 162
- High Temperature Performance of Materials, How to Evaluate—Mar, p 79
- Welding High Alloys with New Roll-Spot Technique—Feb, p 166

Industrial Glasses (File Fact)—May, p 135

Irons
- Flame Hardened Engine Parts for High Production—Apr, p 90
- Magnetic Materials (MATERIALS & METHODS Manual)—Apr, p 115
- Malleable Iron Castings (MATERIALS & METHODS Manual)—Mar, p 109
- Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101
- Nodular Iron, Plywood, Hot Dipped Coating Make Better Fans—June, p 106

Jet Engine Blades, Which Metal Form for—Feb, p 92

Machining and Machined Parts
- Jet Engine Blades, Which Metal Form for—Feb, p 92
- Metal Powder Parts, Machinability of—Apr, p 98

Magnesium
- Magnesium Alloys, Chemical and Electrical Treatments for (File Fact)—Jan, p 121

Magnetic Materials (MATERIALS & METHODS Manual)—Apr, p 115
Malleable Iron Castings (MATERIALS & METHODS Manual)—Mar, p 109

Manuals, Materials & Methods
- Glass-Reinforced Plastics—Feb, p 119
- Magnetic Materials—Apr, p 115
- Malleable Iron Castings—Mar, p 109
- Materials Engineering Review—Jan, p 101
- Welding the Stainless Steels—May, p 115

Materials Engineering at Northrop—Apr, p 83
Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101
Materials Selection, How Economic Factors Influence—May, p 85
Metal Powder Parts, Machinability of—Apr, p 98
Methyl Methacrylate Plastics (File Fact)—June, p 125
New Demands Lead to New Directions in Engineering Materials—June, p 65
Nickel Alloys, Low Expansion (File Fact)—Jan, p 123

Nickel and Its Alloys
- Corrosion Resistant Alloy, A New—May, p 92
- Electrodeposited Nickel, Properties of—Apr, p 101
- Electroless Plating—Where It Stands Today—May, p 96
- Nickel Alloys, Low Expansion (File Fact)—Jan, p 123

Noble and Other Metals
- Rhodium Electroplates Now Possible, Heavy—Mar, p 85
- Titanium, Molybdenum, Zirconium and Hafnium (File Fact)—June p 123
- Tungsten, Tantalum, Columbian and Vanadium (File Fact)—June, p 127

Nodular Iron, Plywood, Hot Dipped Coating Make Better Fans—June, p 106

Nonferrous Metals
- Corrosion of Materials by Liquid Low Melting Alloys (File Fact)—Mar, p 131
- Magnetic Materials (MATERIALS & METHODS Manual)—Apr, p 115
- Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101

Nonmetallic Materials (other than plastics)
- Adhesive Joining of Wood to Steel Increases TV Cabinet Production—Jan, p 82

(Continued on page 330)

Ceramic Coatings in Industrial Applications, High Temperature—Jan, p 162
Corrosion of Materials by Liquid Low Melting Alloys (File Fact)—Mar, p 131
Electrically Conductive Rubbers Are Proving Useful, Where—Apr, p 96
Fuzed Quartz—A Versatile Industrial Material—Feb, p 98
Gaskets, New Flowed-In—Jan, p 78
Industrial Glasses (File Fact)—May, p 135
Nodular Iron, Plywood, Hot Dipped Coating Make Better Fans—June, p 106
Synthetic Rubbers, Two New—May, p 104
Wood-Flour Moldings Compete with Plastics, New—Mar, p 92

Plastics

Fluorocarbon Plastics—Apr, p 110
Fluorocarbon Plastics (File Fact)—Apr, p 133
Foam Plastics Cast to Desired Shape, New—Feb, p 108
Gaskets, New Flowed-In—Jan, p 78
Glass Fiber-Filled Molding Resins, New—Jan, p 87
Glass Fiber Mat Has Controlled Resiliency—Apr, p 176
Glass-Reinforced Plastics (MATERIALS & METHODS Manual)—Feb, p 119
Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101
Methyl Methacrylate Plastics (File Fact)—June, p 125
Plastics Pipe, Seven Kinds of—Mar, p 103
Plastics, Properties and Applications of Some Common (File Fact)—Feb, p 139
Vacuum Formed Thermoplastics for Large, Thin Parts—May, p 94
Vinyl Plastics Sponges—Their Properties and Uses—June, p 104

Powder Metallurgy

High Density Alloys for Heavy Weight Applications—Apr, p 86
Jet Engine Blades, Which Metal Form for—Feb, p 92
Metal Powder Parts, Machinability of—Apr, p 98
Zirconium Now Fabricated by Powder Metallurgy—Feb, p 101
Prepainted Steel Strip for Production Forming—Mar, p 158
Properties and Heat Treatment of Diffusion Hardening (File Fact)—Apr, p 135
Properties and Heat Treament of Magnet Steels (File Fact)—Apr, p 137
Rhodium Electroplates Now Possible, Heavy—Mar, p 85
Salt Bath Case Hardening with Molybdenum and Tungsten—Mar, p 94
Selecting Materials for Small Assemblies—May, p 101
Shell Mold Castings, Where They Stand Today—Jan, p 73

Spinning and Spun Shapes

Spun Metal Shapes, Large—Apr, p 93
Spotwelds, Advance Planning Leads to Consistent High Quality—Mar, p 88
Stainless Steel, How to Clean Stubborn Deposits from—June, p 252
Steam Atmospheres, Many Common Metals Successfully Treated in—Jan, p 85

Steels

Cast Valve Tappets Redesigned for Formed Steel—Mar, p 108
Chromizing Improves Surface Properties of Steels—May, p 106
Corrosion of Materials by Liquid Low Melting Alloys—Mar, p 131
Flame Hardened Engine Parts for High Production—Apr, p 90
Magnetic Materials (MATERIALS & METHODS Manual)—Apr, p 115
Materials Engineering Review and Forecast—(MATERIALS & METHODS Manual)—Jan, p 101
Prepainted Steel Strip for Production Forming—Mar, p 158
Properties and Heat Treatment of Diffusion Hardening (File Fact)—Apr, p 135
Properties and Heat Treatment of Magnet Steels (File Fact)—Apr, p 137
Salt Bath Case Hardening with Molybdenum and Tungsten—Mar, p 94
Selecting Materials for Small Assemblies—May, p 101
Stainless Steel, How to Clean Stubborn Deposits from—June, p 252
Steels, Relationship Between Mechanical Properties and Hardness of (File Fact)—Feb, p 137
Steel Tubing, Centrifugally Cast—Feb, p 104
Welding the Stainless Steels (MATERIALS & METHODS Manual)—May, p 115
Synthetic Rubbers, Two New—May, p 104

Testing and Inspection

High Temperature Performance of Materials, How to Evaluate—Mar, p 79

Tin

Tin-Base Bearing Metals (File Fact)—Mar, p 129
Tin and Tin Alloys (File Fact)—Mar, p 127
Titanium Molybdenum, Zirconium and Hafnium (File Fact)—June, p 123

Titanium and Tantalum

Titanium, Molybdenum, Zirconium and Hafnium (File Fact)—June, p 123
Tungsten, Tantalum, Columbium and Vanadium (File Fact)—June, p 127

Tubing

Steel Tubing, Centrifugally Cast—Feb, p 104

Tungsten and Molybdenum

High Density Alloys for Heavy Weight Applications—Apr, p 86
Salt Bath Case Hardening with Molybdenum and Tungsten—Mar, p 94
Titanium, Molybdenum, Zirconium and Hafnium (File Fact)—June, p 123
Tungsten, Tantalum, Columbium and Vanadium (File Fact)—June, p 127
Vacuum Formed Thermoplastics for Large, Thin Parts—May, p 94
Vacuum Metallizing, Economical Coatings by—June, p 97
Vapor Flux Brazing Produces Quality Joints—June, p 120
Vinyl Plastics Sponges—Their Properties and Uses—June, p 104

Welding and Joining

Adhesive Joining of Wood to Steel Increases TV Cabinet Production—Jan, p 82
Carbide Hardfacing by New Inert-Gas-Arc Method—Jan, p 80
Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101
Spotwelds, Advance Planning Leads to Consistent High Quality—Mar, p 88
Vapor Flux Brazing Produces Quality Joints—June, p 120
Welding High Alloys with New Roll-Spot Technique—Feb, p 166
Welding the Stainless Steels (MATERIALS & METHODS Manual)—May, p 115
White Brass Plated Coatings, A Critical Look at—Feb, p 97
Wood Flour Moldings Compete with Plastics, New—Mar, p 92

Zirconium

Titanium, Molybdenum, Zirconium and Hafnium (File Fact)—June, p 123
Zirconium, New Developments in—May, p 174
Zirconium Now Fabricated by Powder Metallurgy—Feb, p 101

EAST ENGIN
LIBRARY
TN
M58

Authors' Index

Bailey, Leo C., Materials Selection, How Economic Factors Influence—May, p 85
Barry, J. J., Carbide Hardfacing by New Inert-Gas Arc Method—Jan, p 80
Blum, William A., Electrodeposited Nickel, Properties of—Apr, p 101
Campbell, John B., Electroless Plating, May, p 96
Card, Harold S., Vapor Flux Brazing Produces Quality Joints—June, p 120
Chase, Herbert, Flame Hardened Engine Parts for High Production—Apr, p 90
Clauser, H R., Malleable Iron Castings (MATERIALS & METHODS Manual)—Mar, p 109
Du Mond, T. C., Materials Engineering Review and Forecast (MATERIALS & METHODS Manual)—Jan, p 101
Everhart, John L.
Cold Treatments Improve Performance of Materials—Feb, p 115
Jet Engine Blades, Which Metal Form for—Feb, p 92
Metal Powder Parts, Machinability of—Apr, p 98
Fedan, Sidney H., Nodular Iron, Plywood, Hot Dipped Coating Make Better Fans—June, p 106
Fullerton, J. R., Welding High Alloys with New Roll-Spot Technique—Feb, p 166
Glazer, Leo B., Selecting Materials for Small Assemblies—May, p 101
Heuschkel, J., Spotwelds, Advance Planning Leads to Consistent High Quality—Mar, p 88
Kalish, Herbert S.
Zirconium, New Developments in—May, p 174
Zirconium Now Fabricated by Powder Metallurgy—Feb, p 101
Krosch, D. K., Ceramic Coatings in Industrial Applications—Jan, p 162
Leedy, R. M., Aluminum in Electrical Aplications—Feb, p 89
Lewis, Floyd A., Aluminum Castings, How to Buy,—Jan, p 95
Lund, Richard J. (see Bailey, Leo C.)
McGinnis, Jack, Careful Materials Selection Speeds Production of Special Generator—June, p 112
Miller, Charles M., Materials Engineering at Northrop—Apr, p 83
O'Keefe, Philip
Electrically Conductive Rubbers Are Proving Useful, Where—Apr, p 96
Fluorocarbon Plastics—Apr, p 110
Glass-Reinforced Plastics (MATERIALS & METHODS Manual)—Feb, p 119
Plastics Pipe, Seven Kinds of—Mar, p 103
Pfeil, L. B. High Temperature Performance of Materials, How to Evaluate—Mar, p 79
Rand, William M., Gaskets, New Flowed-In—Jan, p 78
Rose, Kenneth
Cast Valve Tappets Redesigned for Formed Steel—Mar, p 108
Glass Fiber-Filled Molding Resins—Jan, p 87
Glass Fiber Mat Has Controlled Resiliency—Apr, p 176
High Density Alloys for Heavy Weight Applications—Apr, p 86
Prepainted Steel Strip for Production Forming—Mar, p 158
Shell Mold Castings, Where They Stand Today—Jan, p 73
Synthetic Rubbers, Two New—May, p 104
Vacuum Formed Thermoplastics for Large, Thin Parts—May, p 94
Vinyl Plastics Sponges—Their Properties and Uses—June, p 104
Rosecrans, S. A. (see Leedy, R. M.)
Rybka, T. E., Steel Tubing, Centrifugally Cast—Feb, p 104
Saltonstall, R. B., White Brass Plated Coatings, A Critical Look at—Feb, p 97
Seelig, Richard P., Chromizing Improves Surface Properties of Steels—May, p 106
Shepard, Mark, Vacuum Metallizing, Economical Coatings by—June, p 97
Spangler, F. L., Steam Atmospheres, Many Common Metals Successfully Treated in—Jan, p 85
Starr, John
Foam Plastics Cast to Desired Shape, New—Feb, p 108
Wood Flour Moldings Compete with Plastics, New—Mar, p 92
Stearley, G. H., Magnetic Materials (MATERIALS & METHODS Manual)—Apr, p 115
Theilsch, Helmut, Welding the Stainless Steels (MATERIALS & METHODS Manual)—May, p 174
Weisberg, Alfred M., Rhodium Electroplates Now Possible, Heavy—Mar, p 85
Wright, F. E., Fuzed Quartz—A Versatile Industrial Material—Feb, p 98